

Draft--For Discussion Only

ERP Linkages

There are many linkages among the objectives in the four resource areas and among the actions that might be taken to achieve these objectives. Most actions that are taken to meet Program objectives, if carefully developed and implemented, will make simultaneous improvements in two, three, or even four resource areas.

Water Use Efficiency: Water use efficiency measures include conservation of water used in urban areas, in agricultural areas, and on wildlife refuges, as well as water recycling. Efficiency measures reduce water demand, thereby reducing the mismatch between supply and demand. Efficiency measures provide other benefits to the ERP as well. Reduction in demand may reduce the diversion of water from the Bay-Delta system which will improve streamflow and reduce the entrainment of fish. In situations where it is prudent to do so, the ERP will fund conservation and transport efficiency measures. Careful application of water to gardens, lawns and farm fields can result in less runoff of herbicides, pesticides, fertilizers, and salts back into water bodies that provide drinking water sources and aquatic habitats.

Water Transfers: The policy framework and regulatory streamlining that will come from the Water Transfers Program will make an important water management tool available for the implementation of all CALFED Programs, including the ERP. A water transfer is a voluntary transaction in which a person or entity that possesses the right to use water can sell the use of the water for a period of time to another person or entity. Transfers reduce the mismatch between supply and demand by satisfying the strongest demands for water and compensating others for reducing their use of that supply. A water transfer that moves water from upstream of the Delta to Delta export (water diversion from the Delta used for purposes outside the Delta) regions may provide ecosystem benefits by increasing flow into the Delta or modifying the timing of flows in ways that may benefit the ecosystem. Transfers of water between two users in Delta export areas may reduce the need to pump water from the Delta and reduce the environmental impacts of that Delta pumping. Finally, water can be transferred from diverters to instream uses, restoring beneficial timing of flows and increasing Delta outflow during critical periods. When it is necessary to meet streamflow targets, the ERP will pursue the acquisition of water from willing sellers. A functional water market, open to environmental buyers, will increase the possibility of maintaining flows and habitats during critical periods.

Environmental Water Account: The Environmental Water Account (EWA), described more fully later in this chapter, will be used to increase operational flexibility to help certain fish species, particularly those protected by state and federal endangered species acts, while increasing water supply reliability. The EWA will alter the timing of water diversions from the South Delta and carry out water transfers in order to reduce entrainment and provide the migratory cues for fishes that are identified in the ERP. The EWA will use the real-time movement of fish in the Delta to trigger alternative water management actions at the Project pumps and the Delta Cross Channel.

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Water Storage: CALFED, through the Integrated Storage Investigation, is evaluating the feasibility and utility of additional environmentally sensitive storage as one approach to increasing water supply reliability and providing instream flow benefits during periods of greater ecosystem need. Storage can be used to improve water supply reliability, provide water for the environment at times when it is needed most, provide flows timed to maintain water quality, and protect levees through coordinated operation with existing flood control reservoirs. In areas such as the San Joaquin River System, new storage may be the only way to augment streamflows during periods of shortage. It may also be the only way to re-create streamflow events without impacting downstream users. The Integrated Storage Investigation, in conjunction with the ERP, will also evaluate the removal of some small dams which serve as barriers to fish migration.

Delta Conveyance: The CALFED preferred program alternative includes several Delta conveyance features that will protect fish, including new screens at South Delta water project intakes, an operable barrier at the head of Old River, screening of any diversion structure constructed on the Sacramento River, and operations carefully guided by real-time monitoring. The preferred program alternative also includes a process for determining the conditions under which any additional conveyance facilities would be needed in the future to meet ecosystem restoration objectives and fish species recovery.

Delta Levee Improvements: Delta levee improvements reduce the risk that levees will fail during flood periods or as a result of earthquakes or gradual deterioration. This can protect not only lives and property of those who would otherwise have been flooded, but can also protect the Delta's complex habitats and critical ecological processes. The deeply subsided islands would become embayments, channel complexity would be lost, and the rearing and foodweb function of the Delta would be significantly altered. Improvements to Delta levees can be made in ways that accommodate habitat restoration, so that levees can simultaneously protect land uses, protect water quality, and support a variety of wetland, aquatic, and riparian habitats. Waterside berms, channel islands and limited setback levees serve to bolster the integrity of the levees and to provide habitat for fish and upland plants and animals.

Water Quality Interrelationships: Water Quality Program actions to improve water quality focus on source control: improving the quality of water that flows through the Bay-Delta system by addressing water quality concerns at their source. In some cases this may involve cleanup of abandoned mines that leach toxic heavy metals from mine tailings. In other cases, water quality may be improved by conserving water on a farm or an urban landscape, reducing the amount of runoff that finds its way back into streams. Many of the water quality actions are staged to provide improvements and insights critical to the successful implementation of the ERP. Likewise, the ERP has located and staged many of the actions to compliment the Water Quality Program.

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Watershed Coordination: Through the watershed coordination element of the Program, local watershed organizations will be better coordinated and engaged in the planning and ~~implementing~~ implementation of the CALFED Program. In the lower watershed, the focus will be on ecosystem restoration and water quality actions. In the upper watersheds, the immediate focus will be on partnership projects with local entities to improve water quality and habitat, decrease erosion, and increase base flows in the tributaries to the Delta. The coordination and outreach role of the Watershed Program will ensure cooperative and durable implementation of the ERP.

Multi-Species Conservation Strategy: An essential feature of the CALFED Program is the assurances for compliance with the State and federal Endangered Species Acts and the State NCCP Act which will derive from the Multi-Species Conservation Strategy (MSCS). The MSCS will provide regulatory certainty and a framework for the acquisition of permits as the CALFED program moves forward. The MSCS will eventually become a "contract" with the agencies and user public who depend on the Delta, permitting all elements of the CALFED Program, including the ERP, to progress, by ensuring the recovery and conservation of species and habitats. The ERP will be the primary mechanism to accomplish recovery and conservation of the covered species of the MSCS, bringing the ecosystem to a certain "baseline" level of ecological health. Implementation of other program actions may and will effect that "baseline" and drop the health of the ecosystem to some level below it; the MSCS will require mitigation measures to bring the ecosystem back to the ERP "baseline" level of health.

The Comprehensive Monitoring, Assessment and Research Program will provide the means to measure progress made toward the goals of the ERP. It will identify the need to make changes through adaptive management and it will provide focus on research needs to reduce scientific uncertainty.

Governance and Financing: The ERP will not succeed without effective governance and adequate financing. CALFED's overall governance and the ecosystem restoration entity must be designed to function within a science-based framework and the larger political arena. Public confidence in the program and measurable success are critical to the ongoing funding of the program.

Public and scientific participation: Public and scientific participation is an essential element of the Ecosystem Quality Strategy. Public involvement and local outreach will have to continue throughout the implementation of the ERP. Public understanding and collaboration are essential to implementation of the large scale changes proposed in the ERP. This participation is achieved in a variety of forms, including science advisory teams, local conservancies, project solicitations, and public meetings. These forms of participation are described in various program plans.

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